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## **Introducción. Arabic Alchemy. Texts and Contexts. Alquimia árabe. Textos y contextos**

Forster, Regula

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## SECCIÓN MONOGRÁFICA INTRODUCCIÓN

### Arabic Alchemy. Texts and Contexts

### Alquimia árabe. Textos y contextos

Regula Forster

Freie Universität Berlin and University of Zürich

Alchemy has been an important field of study in the Arabo-Islamic world from very early on until the end of the nineteenth or even the beginning of the twentieth century.<sup>1</sup> Georges Salmon notes in a report about the Moroccan city of Fez in 1906:

Moulay Al-Ḥasan consacrait tous ses loisirs à l'étude de l'alchimie, en compagnie de deux alchimistes connus au Maroc, Sidi Moḥammed Mezoûr, et le juif Makhloûf Amsellem, tous deux encore vivants, qu'il appelait chaque jour au palais et comblait de faveurs. Un laboratoire d'alchimie était disposé dans une des salles du palais, où un Européen qui fréquente le Dâr Makhzen, nous a dit avoir vu de grands bassins et des récipients ayant autrefois servi à cet usage et aujourd'hui abandonnés.<sup>2</sup>

Alchemy should not be thought of as the eccentricity of a Moroccan sultan, but rather as a widespread practice of the Islamic world, as can be deduced from the travelogue of the Austrian physician and ethnographer Jakob Eduard Polak concerning his stay in Iran published in 1865:

<sup>1</sup> Works on alchemy were still composed in the nineteenth century; see Berlekamp, "Painting as Persuasion", p. 37.

<sup>2</sup> Salmon, "Note sur l'alchimie", p. 451. Al-Ḥasan was Sultan of Morocco from 1873 until 1894.

Die Alchemie findet noch überall ihre zahlreichen Anhänger (*kimiāger*). In jeder Stadt treten Personen auf, welche Metalle umwandeln zu können behaupten und auch Producte ihrer Arbeit vorzeigen [...].<sup>3</sup>

The main goal of Islamic alchemy was, as Polak suggests here, the transmutation of (common) metals into other (precious) metals, especially silver and gold. To achieve his goal, the alchemist needed a mysterious substance called the elixir (*al-iksīr*) or the “philosophers’ stone” (*ḥajar al-falāsifa*, *ḥajar al-ḥukamā*, etc.).<sup>4</sup> The transmutation of base metals into precious ones, especially lead or copper into gold and silver, was not considered a question of trickery, but rather a problem of natural philosophy. The philosophical foundations of the transmutation were sometimes doubted,<sup>5</sup> but that no one ever succeeded in producing gold or silver was not generally considered a counterargument to the veracity of the alchemists’ claim to the truth of their art.<sup>6</sup>

As with other natural and occult sciences, alchemy’s roots go back to Late Antiquity and especially to Hellenistic Egypt in the first centuries CE. Here in Egypt, artisanal practices fused with philosophical concepts of nature of different origins: Aristotelianism, Stoa, Gnosis, Hermetism, etc.<sup>7</sup> Alchemy was a predecessor of modern chemistry; its adepts worked on improving mechanisms of distillation and described chemical processes with great precision. But alchemy was also a natural philosophy aimed at explaining the world. It was believed that who-

<sup>3</sup> Polak, *Persien*, vol. 1, p. 286. I wish to thank Gerald Grobbel, Zurich, for sharing this citation with me.

<sup>4</sup> See, for example, Ullmann, *Die Natur- und Geheimwissenschaften*, esp. pp. 257-261; Hill, “The literature”, pp. 329-330.

<sup>5</sup> See Ullmann, *Die Natur- und Geheimwissenschaften*, pp. 249-255; Hill, “The literature”, pp. 328-329; Anawati, “Arabic alchemy”, pp. 875-882. Critics include the physician and translator Hunayn b. Ishāq (d. 260/873), the philosopher Ya‘qūb b. Ishāq al-Kindī (d. mid 9<sup>th</sup> century) and the historian al-Mas‘ūdī (d. 345/956). Ibn Sīnā (d. 428/1037) explains that the transmutation is impossible because metals are not actually one substance but are different by specifics, and that it is impossible to change either the substance or the specific differences of any matter (Sezgin, *Geschichte*, pp. 7-9; Ullmann, *Die Natur- und Geheimwissenschaften*, pp. 251-252). For religious positions against alchemy, see Carusi, “Alchimia islamica”.

<sup>6</sup> Though failing in the transmutation of common metals could ultimately have lethal consequences: in seventeenth century Istanbul two alchemists were executed for not having produced the gold they had promised, see Bachour, *Oswaldus Crollius*, p. 325.

<sup>7</sup> For an introduction to the history of alchemy, see, for example, Weyer, “Alchemie” and Schütt, *Auf der Suche*. On the Greek origins of Arabo-Islamic alchemy, see especially Viano, *L’alchimie et ses racines*.

ever was able to produce the *prima materia*, the base material that does not contain any accidental qualities, and to transform it into gold by the use of the elixir, would have understood the principles of the world and in consequence would acquire a deep insight into the very nature of God himself. Arabo-Islamic alchemy therefore developed a strong affinity to Sufism: some Sufis would use alchemical terms to describe their experiences, and alchemical treatises were attributed to Sufi authorities, such as al-Ḥasan al-Baṣrī (d. 110/728), Dhū l-Nūn al-Miṣrī (d. 246/861), al-Junayd (d. 298/910) or even Abū Ḥāmid al-Ghazzālī (d. 505/1111).<sup>8</sup>

While only very few Greek texts on alchemy are extant,<sup>9</sup> Arabic alchemy has come down to us in a vast number of manuscripts whose texts remain to a large extent unpublished.<sup>10</sup> As for Arabic alchemical writing, it seems to have started with translations from the Greek, sometimes via Syriac intermediaries, as did Arabic writing on philosophy, medicine and the other natural and occult sciences.<sup>11</sup> The time and location of this part of the so-called translation movement remain doubtful. The eighth century CE seems the most likely date for its beginning. That Egypt might have played a role seems not improbable, but Ḥarrān and North-East Persia are also mentioned.<sup>12</sup> In a second stage, which might be dated to the eighth to tenth centuries CE, pseud-epigraphic writings in Arabic were produced.<sup>13</sup> In writing such works, the Arabic authors were following an antique tradition of pseud-epigraphic alchemical writing. Just like their Greek predecessors, they attributed their works to Judeo-Christian authorities, like Solomon or Mary, Hermetical

<sup>8</sup> See, for example, Ullmann, *Die Natur- und Geheimwissenschaften*, p. 149.

<sup>9</sup> See Ullmann, *Die Natur- und Geheimwissenschaften*, p. 147.

<sup>10</sup> See Vereno, *Studien zum ältesten alchemistischen*, p. 22.

<sup>11</sup> See Ullmann, *Die Natur- und Geheimwissenschaften*, p. 148. Only recently some Arabic texts on alchemy have been shown to be translations of Greek texts that had been preserved, while so far no Arabic text has been linked to an extant Greek original, see Hallum, *Zosimus Arabus*, esp. pp. 114-241. For an example of Syriac influence on a text of Arabo-Islamic alchemy, see Carusi's contribution to the present monographic section.

<sup>12</sup> See Ullmann, *Die Natur- und Geheimwissenschaften*, p. 148. Sezgin tends to date these developments earlier and is generally more willing to accept the existence of Greek originals for alleged translations (cf. Sezgin, *Geschichte*, esp. pp. 3-273). Many Arabic-writing authors quite correctly regarded Ancient Egypt as the home of alchemy, see El Daly, *Egyptology*, esp. pp. 109-120, and Braun's contribution to the present monographic section; for Ḥarrān, see Green, *The City of the Moon God*, esp. pp. 178-179, and again Braun.

<sup>13</sup> See Ullmann, *Die Natur- und Geheimwissenschaften*, p. 151.

ones, like Hermes Trismegistus or Agathodaimon, Greeks, like Pythagoras or Democritus, or to Persian sages, like Mani and Ostanes.<sup>14</sup> It seems that those texts attributed to famous personalities from early Islamic times, such as ‘Alī b. Abī Ṭālib (d. 40/661), the Umayyad prince Khālīd b. Yazīd (d. c. 85/704) or the Shiite Imam Ja‘far al-Šādiq (d. 148/765), should – at least to some extent – also be interpreted as pseud-epigraphs.<sup>15</sup> From around the tenth century CE onwards, Arabic-writing authors started to compose alchemical works under their own names, a practice that later became standard, while the production of pseud-epigraphs seems to have stopped.

Arabic alchemy was by no means a marginal science: the ‘divine art’ was not only practised by the well-known physician and free-thinker Abū Bakr al-Rāzī (in Latin Rhazes, d. 313/925 or 323/935) and accepted as a serious science by such diverse scholars as the philosopher al-Fārābī (d. 339/950-1), the geographer al-Hamadānī (d. 334/945) and the theologian Fakhr al-Dīn al-Rāzī (d. 606/1210), but the enormous number of texts and existing manuscripts attests to its lasting popularity well into the 19<sup>th</sup> and 20<sup>th</sup> centuries. Its penetration into everyday life might also be deduced from the presence of alchemical fragments in the collection of the Cairo Genizah.<sup>16</sup> This said, it comes as a surprise how little research has been done on the subject in the past forty years. The starting points for any study in Arabic alchemy remain the sections by Sezgin in his *Geschichte des arabischen Schrifttums* (1971)<sup>17</sup> and Ullmann in his *Die Natur- und Geheimwissenschaften im Islam* (1972).<sup>18</sup>

As in the years before the groundbreaking publications by Sezgin and Ullmann, Jābir b. Ḥayyān and his role as founding father of Islamic alchemy have retained their prominence in more recent studies of Arabo-Islamic alchemy: scholars have focused both on the Jābir problem itself<sup>19</sup> and on analysing texts from the Corpus Jābirianum.<sup>20</sup> Furthermore, early

<sup>14</sup> See Ullmann, *Die Natur- und Geheimwissenschaften*, pp. 146-147 and pp. 151-191.

<sup>15</sup> See Ullmann, *Die Natur- und Geheimwissenschaften*, pp. 192-197; Sezgin (*Geschichte*, esp. pp. 120-132) again takes quite a different view and accepts the authenticity of these works.

<sup>16</sup> Bohak, “Towards a catalogue”.

<sup>17</sup> Sezgin, *Geschichte*, pp. 1-299.

<sup>18</sup> Ullmann, *Die Natur- und Geheimwissenschaften*, pp. 145-270.

<sup>19</sup> See especially Haq, *Names, Natures, and Things*.

<sup>20</sup> Especially Lory in Jābir b. Ḥayyān, *L’élaboration*; Lory in Jābir b. Ḥayyān, *Dix traités*; Haq, *Names, Natures, and Things*.

works attributed to Greek authors, such as Zosimus of Panopolis or Apollonius of Tyana, which might be viewed either as translations from Greek or as pseud-epigraphic works have been the focus of scholarly attention.<sup>21</sup> Of later Islamic Alchemy, only Ottoman-period alchemy has received serious scholarly interest, largely due to its interaction with Paracelsian Iatro-Chemistry.<sup>22</sup> Furthermore, the relationships between alchemy and Sufism on the one hand<sup>23</sup> and of alchemy and Shiism on the other have been the subject of thorough studies in recent years.<sup>24</sup>

The last couple of years have seen the publication of several significant editions of alchemical texts. Ingolf Vereno produced an edition and translation of two early Hermetic texts, *Risālat al-Sirr* and *Risālat al-Falakīya al-kubrā*, together with an important study of their intellectual background and context,<sup>25</sup> while Juliane Müller has made available two pseud-epigraphic dialogues on alchemy attributed to Aristotle and to two alchemists, Qaydarūs and Mītāwus.<sup>26</sup> Zosimus' *Muṣḥaf al-ṣuwar* (in both a facsimile and an English translation) has become available in the *Corpus Alchemicum Arabicum* series as has *Kitāb Hall al-rumūz* by Ibn Umayl (fl. probably first half of the 4<sup>th</sup>/10<sup>th</sup> century).<sup>27</sup> Belonging to a rather different genre is the collection of alchemical recipes produced in Georg Leube's recent edition of a manuscript from Freiburg im Breisgau.<sup>28</sup>

Though the last forty years have been fruitful in many ways for the study of Arabo-Islamic alchemy, the field clearly remains understudied. This monographic section therefore brings together articles by both established scholars and younger researchers discussing different phenomena of early Arabo-Islamic alchemy.

Obviously, the Jābir question remains the most discussed issue in the field of Arabic alchemy. While the ultimate points of the problem – i.e. whether Jābir b. Ḥayyān was a historical person and whether he authored the large corpus of alchemical works attributed to him – remain open to

<sup>21</sup> Weisser, *Das Buch über das Geheimnis*; Zosimus, *Muṣḥaf*; Zosimus, *The Book*. See also Hallum, *Zosimus Arabus*.

<sup>22</sup> See especially Bachour, *Oswaldus Crollius*; and Artun, *Hearts of Gold and Silver*.

<sup>23</sup> Lory, *Alchimie et mystique*.

<sup>24</sup> Lory, "Mots d'alchimie"; de Smet, "L'élaboration de l'élixir".

<sup>25</sup> Vereno, *Studien zum ältesten alchemistischen*.

<sup>26</sup> Müller, *Zwei arabische Dialoge*.

<sup>27</sup> Zosimus, *Muṣḥaf*; Zosimus, *The Book*; Ibn Umayl, *Book of the Explanation*.

<sup>28</sup> Leube, *Die Rezepte*.

discussion, two of the contributions in this monographic section discuss aspects of the Corpus Jābirianum. Pierre Lory and Paola Carusi, by furthering our knowledge of the corpus, contribute to an eventual solution of the Jābir problem more generally. Pierre Lory, in his article entitled *Aspects de l'ésotérisme chiite dans le Corpus Ġābirien: Les trois Livres de l'Elément de fondation*, focuses on elements of esoteric Shiism present in one of the core texts of the corpus: namely, the three-partite *Kitāb al-Uṣṭuqus al-uss*. Indeed, the Imam is seen here as central to the spread and teaching of alchemy, which means that Shiite elements in *Kitāb al-Uṣṭuqus al-uss* should not be interpreted as interpolations but rather as central elements of the Corpus Jābirianum. At the same time, the alchemist is equated with the Imam himself; like the Shiite Imam, the alchemist can achieve ultimate wisdom and knowledge of this world and the next. This means that the Imam may become dispensable, and the Shiite traces in the Corpus could therefore be ignored by later readers.

In her article on *Iznīqī and Jābir; Sirr and Miftāḥ: Two authors, four titles, one alchemical treatise*, Paola Carusi summarises years of research into an alchemical treatise which in its manuscripts is usually attributed to Jābir b. Ḥayyān. This treatise, perhaps best entitled *Miftāḥ jannāt al-khuld*, is noteworthy even within the Jābirian Corpus for its use of ancient sources, among them *Muṣḥaf al-jamā'a* (the Latin *Turba philosophorum*) and *Kitāb al-Ḥabīb*. Furthermore, the treatise seems to be very clearly linked to the tradition of the workshop and the laboratory, thus prompting scholars to discuss alchemy as both a natural philosophy and a practical art.

The fragmentary nature of our knowledge of even early Arabic alchemy becomes evident when it is considered that even texts from the 'classical' period, i.e. the ninth and tenth centuries, remain unedited and unstudied. This holds true for Maslama b. Qāsim al-Qurṭubī's (d. 353/964) *Rutbat al-ḥakīm*, the sister work of his notorious magical book *Ghāyat al-ḥakīm* (in Latin translation called *Picatrix*).<sup>29</sup> In their contribution *Again on Maslama Ibn Qāsim al-Qurṭubī, the Ikhwān al-Ṣafā' and Ibn Khaldūn: New Evidence from Two Manuscripts of Rutbat al-ḥakīm*, Godefroid de Callatāy and Sébastien Moureau focus on the contested authorship of the *Rutba*. Through a new reading of known

<sup>29</sup> A critical edition of *Rutbat al-ḥakīm* is now being prepared by Godefroid de Callatāy and Sébastien Moureau.



sources and a study of manuscript evidence, they demonstrate that it was quite common amongst medieval Andalusian scholars to misattribute not only the *Rutba* but also the *Ghāya* and especially *Rasā'il Ikhwān al-Ṣafā'* to one and the same author: namely, the astronomer Maslama al-Majrīṭī (d. 395/1004 or shortly thereafter). From this Andalusian perspective, the *Ikhwān's* philosophy was a first step towards wisdom, while mastering alchemy, as represented in *Rutbat al-ḥakīm*, became a necessary prerequisite to achieve the true goal of the sage, which is then presented in the magical *Ghāya*.

While Arabic alchemy in general remains understudied, its literary features are even more commonly ignored. They are therefore the subject of discussion in the contributions by Christopher Braun and Regula Forster. Christopher Braun in his “*Who began this art? From whence did it emerge?*”: *A Hermetic Frame Story on the Origins of Alchemy in Pseudo-Ibn Waḥshīya's The Book of the Ziziphus Tree of the Furthest Boundary* discusses a pseud-epigraphic work attributed to the famous specialist for ‘causes Nabatean’, Abū Bakr Muḥammad Ibn Waḥshīya. While his *Filāḥa al-nabaṭīya* is rightly famous and well studied, the probably pseud-epigraphic alchemical *Kitāb Sidrat al-muntahā* has not been in the focus of scholarly attention. Braun analyses its frame story in which the origin of alchemy is treated.

The present writer discusses in her contribution three Arabic dialogues on alchemy – *Masā'il Khālīd li-Maryānus al-rāhib*, *Kitāb Mihrārīs al-ḥakīm* and *Risālat al-ḥakīm Qaydarūs* – and their literary mise-en-scène. It is argued that these dialogues, though they must be seen as literary fictions, still represent an ideal of alchemical education, thereby showing how the secrets of alchemy could and should be taught.

It has long been clear that the terminology of Arabic alchemy is worth serious treatment,<sup>30</sup> and the problem has been addressed more recently by Manfred Ullmann,<sup>31</sup> Pierre Lory<sup>32</sup> and Gabriele Ferrario.<sup>33</sup> Gotthard Strohmaier, in his *Elixir, Alchemy and the Metamorphoses of Two Synonyms*, goes one step further in this direction in questioning

<sup>30</sup> That Siggel's lexicon (Siggel, *Decknamen*) is problematic has been widely acknowledged, see the critique by Ullmann, *Die Natur- und Geheimwissenschaften*, 268-270. For the terminology of minerals, Käs, *Mineralien*, is an excellent starting point, though his focus is not on alchemy exclusively.

<sup>31</sup> Ullmann, *Katalog*, vol. 2.

<sup>32</sup> Lory, “Mots d'alchimie”.

<sup>33</sup> Ferrario, “Understanding”.



the very origin of the word *kīmiyā*'. While usually a Greek origin of the term is accepted, Strohmaier suggests that Chinese influence might indeed be traceable here. If *kīmiyā*' were to mean, like its Chinese counterpart, the 'philosopher's stone', it would therefore be synonymous to *iksīr*. But both terms underwent a serious semantic shift, especially in their European adaptations: while *kīmiyā*' eventually came to designate the art itself, *iksīr* on the other hand is no longer considered to be a dry powder but rather a liquid.

Finally, Mohammad Karimi Zanjani Asl, with his article entitled *Sirr al-khalīqa, and its influence in the Arabic and Persianate world: 'Awn b. al-Mundhir's commentary and its unknown Persian translation*, draws our attention to a largely ignored field within Islamic alchemy: namely, the reception of Arabic works in the Persianate world. In drawing attention to Pseudo-Apollonius of Tyana's *Sirr al-khalīqa*, Karimi discusses one of the most influential texts of early Arabic alchemy. While it has been known for some time that there is an Arabic commentary on *Sirr al-khalīqa* by 'Awn b. al-Mundhir, Karimi has now identified a Persian translation of 'Awn's work which he presents in edition here for the very first time thereby adding considerably to our knowledge of Arabo-Islamic alchemy.

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